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EXAMINER

AMINI, JAVID A

ART UNIT

PAPER NUMBER

2672

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,626

Applicant(s)

AHO ET AL.

Examiner

Javid A Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed April 16, 2004 have been fully considered but they are not persuasive.

- Applicant on page 2, lines 3-5 argues that claims 1-7 and 9-16 are patentable over the combination of Rader in view of Shimada, because the references failed to disclose or suggest changing the position of the first part of the display element on the display element at set intervals in order to avoid display burn-in. *Examiner's reply: Shimada in col. 6 lines 52-55 teaches that the reduction mode is entered automatically when there is no input by the user for a predetermined period (e.g., five minutes) or if the mode is set by the user, although the subsequent flowchart is not shown.*
- Applicant on page 2, lines 10-13 argues the combination of Rader and Shimada also fails to disclose or suggest changing the position of the first part of the display element on the display element at set intervals in order to avoid display burn-in. *Examiner reply: the response should be similar to previous paragraph.*
- Applicant on page 2, lines 14-17 argues that Examiner is mistaken, because the office action correctly points out that Rader fails to disclose, and refers to Shimada, figs. 6A-6D. *Examiner's reply: It is not clear what Applicant means by above disclosure. However, Shimada illustrates clearly two modes in figs. 2A and 2B and the result shown in figs. 6A-6D. Shimada in col. 5, lines 25-45 discloses the signals DISP OFF1 and DISP OFF2 set in the register 2 are control signals for turning the display of the liquid crystal driver into the OFF state (constant*

output voltage), in which in the normal mode, these signals DISP OFF1 and DISP OFF2 are turned into "H" in all the drivers, while in the reduction mode, only the DISP OFF1 which is connected to unused drivers is turned into "L". The timing waveforms of the operation as above described are shown in figs. 2A and 2B. fig. 2A is in the normal mode, and fig. 2B is in the reduction mode. The waveform is represented in one frame with the signals LOAD, DF and FRAME as shown in the upper portion, and in one line with the signals DF to address B as shown in the lower portion. In FIGS. 2A and 2B, the time width corresponding to one frame is the same. fig. 3 shows a drive circuit of liquid crystal panel 17. 11 and 12 are command drivers (e.g., MSM5298: Oki Electric Industry Co.), and 13, 14, 15 and 16 are segment drivers (e.g., MSM5299: Oki Electric Industry Co.). In the normal mode, all the drivers are used, while in the reduction mode, the drivers 11, 13, 14 are used.

- Applicant on page 2, lines 18-26 argues the reference Shimada discloses an electronic device with a normal mode of 320X128 pixels. And on page 3 discloses the reduced image is always presented in the upper left corner consisting of pixels on rows 1-64 and columns 1-160 in the display matrix. And Applicant concluded that Shimada fails to disclose the feature of the claim language. *Examiner's reply: Shimada in col. 6 lines 52-55 teaches that the reduction mode is entered automatically when there is no input by the user for a predetermined period (e.g., five minutes) or if the mode is set by the user, although the subsequent flowchart is not shown. Claim language in claim 1 does not specify the location of partial*

screen mode, and also does not specify the nature of changing the position.

Shimada in col. 6, lines 47-67 teaches VRAM10 that requires changing the screen value in the reduced screen.

- *For the reasons above the pervious rejection is still maintained.*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 9-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Rader and further in view of Shimada US 5,394,166.

1. As per claim 1,

Rader in (Col. 3, line 48-52) discloses that the full display mode can be automatically activated when the cover is opened and the partial display mode can be automatically entered when the cover is closed responsive to the inputs from the sensors. Rader in abstract discloses that partial display field, or area, is controlled to generate images in a first operating mode to conserve power. Rader in (Col. 3, line 44-45) discloses that the CPU responds to these sensors to control the display panel to display an image only in the partial display field. As applicant discloses on page 7 of remarks, that Rader does not explicitly (clearly) specify changing the position of first part of the display element at set intervals. However Shimada illustrates clearly in Figs. 6A-6D. And also Shimada in abstract discloses that a display screen at all times saving the power for

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displaying, thus, there is provided a device on which appropriately edited data is displayed in a small screen (interpretation: less power to a display is corresponding to less burn-in to a display). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shimada into Rader, in order to reduce the display area of Rader in Fig. 4. A person skilled in the art could integrate the step of display compressed image data from Fig. 5 of Shimada's flow chart into the Rader's Fig. 4 between steps 200 and 424. The two different modes of display will appear as a result.

2. Claim 2,

Rader discloses in (Col. 3, line 44-45) that the CPU responds to these sensors to control the display panel to display an image only in the partial display field.

Rader discloses in (Con. 8, line 21-23) that if 4 bit gray scale is employed the image capable of being rendered is reduced by a factor of four. This skill is very well known in the art.

3. Claim 3,

Rader discloses in (col. 8, line 30-32) the partial display field can be placed at any region of the full display screen area by selecting the rows and columns to be controlled by the pixel off signal.

4. Claim 4,

Rader discloses in (col. 8, line 30-32) that the partial display field can be placed at any region of the full display screen area by selecting the rows and columns to be controlled by the pixel off signal.

5. Claim 5,

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Rader discloses in (col. 8 , line 60-65) that Additionally, the output switch can be controlled so as to blank different rows and columns, thus changing the location of the partial display field. By changing the blanked columns and rows, the partial display field sourced from the second buffer can be placed in different areas of the display screen.

6. Claim 6,

Rader discloses the amount of rows and columns in the partial display field see rejection of claim

7. Claim 7,

Rader discloses the amount of rows and columns in the partial display field see rejection of claim.

8. Claim 9,

Rader discloses in (Col. 3, line 40-44) that the CPU in Fig. 3 also has an internal sensor (not shown) that detects inactivity. If the CPU receives no inputs from the user input and RF circuit for a predetermined period of time, the CPU can enter a sleep mode.

9. Claim 10,

Rader discloses in Fig. 1 and 2 a mobile station.

10. Claim 11,

Rader in (3, line 44-52) discloses that the CPU in Fig. 3 (segment # 312) responds to these sensors to control the display panel to display an image only in the partial display field when the phone enters a "sleep mode" due to inactivity of the processor, or when the phone is active while the cover 108 is closed. The full display mode can be automatically activated when the cover 108 is opened and the partial display mode can be automatically entered when the cover 108 is closed responsive to the inputs from the sensors. As applicant discloses on page 7 of remarks,

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that Rader does not explicitly (clearly) specify changing the position of first part of the display element at set intervals. However Shimada illustrates clearly in Figs. 6A-6D. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shimada into Rader, in order to reduce the display area of Rader in Fig. 4. A person skilled in the art could integrate the step of display compressed image data from Fig. 5 of Shimada's flow chart into the Rader's Fig. 4 between steps 200 and 424. The two different modes of display will appear as a result.

11. Claims 12,

As for "A device according to claim 1, wherein the changing means is arranged to change the information displayed on the first part of the display element", Rader in (Col. 3, line 44-45) discloses that the CPU responds to these sensors to control the display panel to display an image only in the partial display field (the first part of display).

12. Claim 13,

As for "An electronic device comprising: a display element to display information, wherein said display element has two modes, a full-screen mode to use the entire display element to display a first information and a partial screen mode to use a first part of the display element in which partial screen mode a second part of the display element is switched off; means for switching the device into energy conservation mode by switching the display element to said partial screen mode; means for controlling the display element during energy conservation mode to display information on said first part; and changing means for changing the position of the first part of the display element on the display element at set intervals in order to avoid display burn-in".

Rader discloses in (Col. 3, line 48-52) that the full display mode can be automatically activated

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when the cover is opened and the partial display mode can be automatically entered when the cover is closed responsive to the inputs from the sensors. Rader discloses in abstract that partial display field, or area, is controlled to generate images in a first operating mode to conserve power. Rader discloses in (Col. 3, line 44-45) that the CPU responds to these sensors to control the display panel to display an image only in the partial display field. As applicant discloses on page 7 of remarks, that Rader does not explicitly (clearly) specify changing the position of first part of the display element at set intervals. However Shimada illustrates clearly in Figs. 6A-6D. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shimada into Rader, in order to reduce the display area of Rader in Fig. 4. A person skilled in the art could integrate the step of display compressed image data from Fig. 5 of Shimada's flow chart into the Rader's Fig. 4 between steps 200 and 424. The two different modes of display will appear as a result.

13. Claim 14,

As for "A device according to claim 13, wherein the changing is arranged to change the position of said first part of the display element on the display element". Rader discloses in (Col. 3, line 44-45) that the CPU responds to these sensors to control the display panel to display an image only in the partial display field (the first part of display).

14. Claim 15,

As for "A method for decreasing the energy consumption of an electronic device, wherein a first part of the display element is used and a second part of the display element is switched off to conserve energy; information is presented on the first part of the display element; and the method further includes changing information displayed on the first part of the display element at set

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intervals in order to avoid display burn-in", Rader discloses in (Col. 3, line 48-52) that the full display mode can be automatically activated when the cover is opened and the partial display mode can be automatically entered when the cover is closed responsive to the inputs from the sensors. Rader discloses in abstract that partial display field, or area, is controlled to generate images in a first operating mode to conserve power. Rader discloses in (Col. 3, line 44-45) that the CPU responds to these sensors to control the display panel to display an image only in the partial display field. As applicant discloses on page 7 of remarks, that Rader does not explicitly (clearly) specify changing the position of first part of the display element at set intervals.

However Shimada illustrates clearly in Figs. 6A-6D. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Shimada into Rader, in order to reduce the display area of Rader in Fig. 4. A person skilled in the art could integrate the step of display compressed image data from Fig. 5 of Shimada's flow chart into the Rader's Fig. 4 between steps 200 and 424. The two different modes of display will appear as a result.

15. Claim 16,

As for "A method according to claim 15, further comprising changing the position of the first part of the display element on the display element", Rader discloses in (Col. 3, line 44-45) that the CPU responds to these sensors to control the display panel to display an image only in the partial display field (the first part of display).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini
June 23, 2004


JEFFERY BRIER
PRIMARY EXAMINER